

AMENDMENTS TO THE CLAIMS

1. (CURRENTLY AMENDED) A method for classifying a first video type and a second video type in one video signal ~~having a plurality of frames~~, comprising the steps of:

(A) buffering said video signal in a buffer, said video signal carrying a content comprising a sequence of frames;

(B) reading a first of said frames from said buffer directly to an analyzer;

(C) reading a second of said frames from said buffer directly to said analyzer;

(D) generating in said analyzer a plurality of first parameters defining a first transition portion between a first active portion and a first blank portion in a said first frame of said frames;

~~(D)~~ (E) generating in said analyzer a plurality of second parameters defining a second transition portion between a second active portion and a second blank portion in a said second frame of said frames, wherein said second frame follows said first frame in said content by a fixed temporal distance;

~~(E)~~ (F) comparing said first parameters with said second parameters to generate a comparison value; and

~~(D)~~ (G) generating a signal indicating (i) said first video type when said comparison value is greater than a

predetermined threshold and (ii) said second video type when said comparison value is less than said predetermined threshold, wherein
25 said predetermined threshold determines if said first frame and said second frame are part of an unbroken segment in said content.

2. (CURRENTLY AMENDED) The method according to claim 1, wherein (i) said first video type comprises a commercial in said content and (ii) said second video type comprises a program in said content.

3. (PREVIOUSLY PRESENTED) The method according to claim 1, wherein said first parameters comprise (i) a first T parameter that represents a first number of top lines in said first transition portion, (ii) a first B parameter that represents a
5 first number of bottom lines in said first transition portion, (iii) a first L parameter that represents a first number of left columns in said first transition portion, and (iv) a first R parameter that represents a first number of right columns in said first transition portion.

4. (PREVIOUSLY PRESENTED) The method according to claim 1, wherein said first transition portion comprises a plurality of pixels with no materially non-black content.

5. (PREVIOUSLY PRESENTED) The method according to claim 3, wherein said second parameters comprise (i) a second T parameter that represents a second number of top lines in said second transition portion, (ii) a second B parameter that represents a second number of bottom lines in said second transition portion, (iii) a second L parameter that represents a second number of left columns in said second transition portion and (iv) a second R parameter that represents a second number of right columns in said second transition portion.

6. (PREVIOUSLY PRESENTED) The method according to claim 1, wherein said second transition portion comprises a plurality of pixels with no materially non-black content.

7. (CURRENTLY AMENDED) The method according to claim 5, wherein step ~~(D)~~ (G) comprises comparing ~~(A)~~ (a) a sum of (i) a first absolute value of a first difference between said first T parameter and said second T parameter plus (ii) a second absolute value of a second difference between said first B parameter and said second B parameter plus (iii) a third absolute value of a third difference between said first L parameter and said second L parameter plus (iv) a fourth absolute value of a fourth difference between said first R parameter and said second R parameter with ~~(B)~~ (b) said predetermined threshold.

8. (CANCELED).

9. (ORIGINAL) The method according to claim 1, wherein said video signal comprises a digital video signal.

10. (CURRENTLY AMENDED) An apparatus comprising:

a buffer configured to buffer one video signal, said video signal carrying a context comprising a sequence of frames;

a first detector circuit configured to (A) read a first
5 of said frames directly from said buffer, (B) read a second of said
frames directly from said buffer and (C) generate (i) a plurality
of first parameters defining a first transition portion between a
first active portion and a first blank portion in ~~a~~ said first
frame ~~of one video signal having a plurality of frames~~ and (ii) a
10 plurality of second parameters defining a second transition portion
between a second active portion and a second blank portion in ~~a~~
said second frame ~~of said video signal~~, wherein said second frame
follows said first frame in said content by a fixed temporal
distance;

15 a second detector circuit configured to (i) generate a
comparison value by comparing said first parameters with said
second parameters and (ii) generate a signal indicating (a) a first
video type when said comparison value is greater than a

predetermined threshold and (b) a second video type when said
20 comparison value is less than said predetermined threshold; and

a controller (i) connected bidirectionally between said first detector circuit and said second detector circuit and (ii) configured to control said first detector circuit and said second detector circuit.

11. (PREVIOUSLY PRESENTED) The apparatus according to claim 10, wherein said first detector circuit comprises a 4-set detector configured to detect at least four parameters from each of said frames.

12. (PREVIOUSLY PRESENTED) The apparatus according to claim 10, wherein said second detector circuit comprises a segment detector configured to receive said second parameters following receipt of said first parameters.

13. (PREVIOUSLY PRESENTED) The apparatus according to claim 10, wherein said first detector circuit generates said first parameters and said second parameters in response to (i) a threshold signal and (ii) one or more samples from said frames.

14. (CANCELED).

15. (CURRENTLY AMENDED) The apparatus according to claim 10, wherein a change in said signal indicates a transition between a first program type in said content and a second program type in said content.

16. (CURRENTLY AMENDED) A method for distinguishing between a commercial and a program in one digital video signal ~~having a plurality of frames~~, comprising the steps of:

(A) buffering said digital video signal in a buffer,
5 said digital video signal carrying a content comprising a sequence of frames;

(B) reading a first of said frames from said buffer directly to an analyzer;

(C) reading a second of said frames from said buffer
10 directly to said analyzer;

(D) determining in said analyzer both a first size and a first position of a first truly active region in a said first frame of said frames;

~~(B)~~ (E) determining in said analyzer both a second size
15 and a second position of a second truly active region in a said second frame of said frames, wherein said second frame follows said first frame in said content by a fixed temporal distance; and

~~(C)~~ (F) generating a signal to indicate (i) a lack of a scene transition between said commercial in said content and said

20 program in said content when both said first size and said first
position of said first truly active region are substantially
similar to both said second size and said second position of said
second truly active region and (ii) a presence of said scene
transition between said commercial and said program when at least
25 one of said first size and said first position of said first truly
active region is not substantially similar to a corresponding at
least one of said second size and said second position of said
second truly active region.

17. (CANCELED).

18. (CURRENTLY AMENDED) The method according to claim
16, further comprising the steps of:

generating a first segment signature associated with said
first frame where said scene transition represents a change from
5 said program in said content to said commercial in said content;
and

generating a second segment signature associated with
said second frame.

19. (PREVIOUSLY PRESENTED) The method according to claim
18, wherein said method further comprises implementing a commercial
advance by:

5 skipping said frames having said second segment
signature; and
returning from said commercial advance when said frames
have said first segment signature.

20. (CURRENTLY AMENDED) A method for segmenting one
video signal ~~into a plurality of program segments and a plurality
of commercial segments~~, comprising the steps of:

5 (A) buffering said video signal in a buffer, said video
signal carrying a content comprising a plurality of program
segments and a plurality of commercial segments;

(B) reading a first segment of said video signal from
said buffer directly to an analyzer;

10 (C) generating in said analyzer a plurality of first
parameters defining a first signature of ~~a~~ said first segment ~~of
said program segments~~ independent of ~~a~~ said content of said first
segment;

~~(B)~~ (D) detecting an end of said first ~~program~~ segment;

15 (E) reading a second segment of said video signal from
said buffer directly to said analyzer;

~~(C)~~ (F) generating in said analyzer a plurality of second
parameters defining a second signature of ~~a~~ said second segment ~~of
said video signal;~~

20 ~~(D)~~ (G) comparing said second parameters to said first
parameters; and

~~(E)~~ (H) classifying said second segment as a particular
one of said program segments where said first parameters and said
second parameters are substantially similar and said first segment
comprises said particular program segment.

21. (CURRENTLY AMENDED) The method of claim 20, wherein
said second parameters indicate a return to said particular program
segment at the end of one of said commercial segments ~~start of~~
~~active video content~~.

22. (NEW) The method according to claim 20, further
comprising the step of:

 determining that said first segment comprises said
particular program segment prior to step (D).

23. (NEW) The method according to claim 20, further
comprising the step of:

5 classifying said second segment as one of said commercial
segments where said first parameters and said second parameters are
not substantially similar.

24. (NEW) The method according to claim 23, further comprising the step of:

determining whether a new scene has begun after classifying said second segment as said one of said commercial segments.